

Appl. No. 09/943,487

Reply to Office action of November 5, 2003

REMARKS

Claims 8-21 and 23-29 are pending in the application. Claims 8, 11 and 26 have been amended. The specification has been amended. Those amendments and the following remarks are believed to be fully responsive to the Office Action mailed November 5, 2003 and to place all the pending claims in condition for allowance. The foregoing amendments are taken in the interest of expediting prosecution, and there is no intention of surrendering any range of equivalents to which Applicants would otherwise be entitled in view of the prior art. Allowance of the application is requested in view of those amendments and the following remarks.

CLAIM REJECTIONS - 35 USC § 112

Claim 26 was rejected under 35 USC § 112 because the claim contained a limitation involving a trademarked element. This rejection is believed overcome by the amendment to claim 26 by which the trademark limitation has been removed and the buff pad is instead described by one of its physical properties. The specification has been amended to correct a typographical error and to include the characteristics of the Politex Supreme™ buff pad. No new matter has been added by this amendment because the recited characteristics of such buff pad are well known to those of skill in the art.

CLAIM REJECTIONS - 35 USC § 103

Applicants confirm the correctness of the Examiner's presumption; the subject matter of the various claims was commonly owned at the time any inventions covered therein were made.

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Claims 8-17, 23-25 and 27-29 were rejected under 35 USC 103(a) in view of Li et al. ("Li") in view of Swedek et al. ("Swedek"). This rejection is believed to be in error for at least the following reasons. Li does not disclose or suggest removing a material layer at a first CMP station and removing a barrier layer at a buff station as recited in amended claim 8. In column 6, beginning at line 7, Li states:

Embodiments of the present invention included removing the Cu overburden and barrier layer in various ways. It was found suitable to remove to [sic] initially most of the Cu overburden by CMP on a first platen leaving a thin discontinuous film of Cu on the barrier layer. Buffing is then conducted on a second platen to remove the remaining thin discontinuous Cu film and the barrier layer.

Li does not disclose or suggest removing the Cu layer ("a material layer") on a first CMP station, but instead discloses removing that layer partially on a first platen and completing the removal on a second platen. Even the passage specifically recited by the Examiner, column 7, lines 31-35, specifically points out that the Cu layer is not completely removed at the first CMP station. The cited passage states "leaving a film of Cu or Cu alloy on the barrier layer." Swedek discloses nothing to overcome the deficiency of Li. Swedek does not disclose or suggest anything relating to removing a material layer overlying a barrier layer on the surface of a semiconductor wafer.

The Examiner relies on Swedek for a showing of abrasive slurry. The two references should not be combined in the manner suggested by the Examiner. Li discloses a process for removing metal layers. Swedek discloses a process for removing dielectric layers. Swedek discloses nothing about removing metal layers. There is nothing in either reference to suggest

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that the slurry used by Swedek for removing dielectric layers is applicable to the process employed by Li for removing metal layers.

Dependent claims 9-21 and 23-29 were rejected under 35 USC 103(a) over Li together with Swedek, Easter, Mok, and Wang, et al., the secondary references taken either alone or in combination. Dependent claim 11 has been amended to make it properly dependent from claim 9 instead of directly from claim 8. Dependent claims 9-21 and 23-29 all depend, either directly or indirectly, from claim 8. Because claim 8 is believed to distinguish over the references cited by the Examiner, all pending claims are believed to distinguish over those references and to be in condition for allowance. Further to the discussion above, none of Easter, Mok, or Wang, et al. overcomes the deficiencies of the combination of Li with Swedek as applied to independent claim 8. Allowance of the pending claims is therefore earnestly requested.


If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

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